

A. Overview Information

I. Federal Agency Name: Defense Advanced Research Projects Agency, Information Processing Technology Office

II. Funding Opportunity Title: Information Theory for Mobile Ad-Hoc Networks (ITMANET)

III. Announcement Type: Initial Broad Agency Announcement (BAA)

IV. Funding Opportunity Number: BAA 06-37

V. CFDA Number: 12.910

VI. Key Dates

1. Initial Closing: 12:00 Noon (ET), June 28, 2006
2. Final Closing: 12:00 Noon (ET), May 1, 2007
3. All administrative correspondence and questions on this solicitation, including requests for information on how to submit a proposal to this BAA, must be received at one of the administrative addresses below by 12:00 Noon (ET) on April 20, 2007

B. Full text of announcement

I. Funding Opportunity Description

The objective of the Information Theory for Mobile Ad-Hoc Networks (ITMANET) program is to generate and exploit superior theoretical insights concerning the design, deployment, and operation of a new generation of wireless mobile networks. To achieve this objective, a central challenge problem has been devised: to close a longstanding open problem concerning the capacity limits of Mobile Ad-hoc NETWORKS (MANETs). The central program thesis is that a novel kind of information theory --- one powerful enough to address the challenge problem --- will have wide-ranging practical consequences in the long term. Specifically, it is believed that capacity understanding in relation to necessary trades has immediate application, and moreover that new architectures and protocols will emerge as a side-effect of developing the techniques needed for capacity understanding. Residual knowledge generated by researchers who fully engage in this challenge problem will serve the national interest in progress toward more ubiquitous, reliable, and trustworthy communication systems. Refer to the Proposer Information Pamphlet (PIP) referenced in section IV.6 of this Announcement for additional detail.

II. Award Information

Proposals may span four-and-a-half (4.5) years. For planning purposes, proposers should anticipate a start date of September 1, 2006.

DARPA is soliciting the necessary program research through two mechanisms: a Broad Agency Announcement BAA 06-37 and a Research Announcement RA 06-38 (see PIP, Section A - Dual solicitation strategy, and Section C - Proposer Eligibility). DARPA anticipates that the program will be funded in the 6.1 budget category at a maximum of \$13,500,000 across all awards resulting from the two solicitations.

DARPA anticipates that two proposals will be selected for negotiation: one from each solicitation. However, in any event the Government reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this solicitation and to make awards without discussions with offerors. The Government also reserves the right to conduct discussions if the Source Selection Authority later determines them to be necessary. Proposals identified for negotiation may result in a grant, cooperative agreement, or other transaction depending upon the nature of the work proposed, the required degree of interaction between parties, and other factors. If warranted, portions of resulting awards may be segregated into pre-priced options. Additionally, DARPA reserves the right to award without discussions, and to accept proposals in their entirety or to select only portions of proposals for award. In the event that DARPA desires to award only portions of a proposal, negotiations may be opened with that offeror. If the proposed effort is inherently divisible and nothing is gained from the aggregation, proposers should consider submitting it as multiple independent efforts.

III. Eligibility Information

1. Eligible Applicants

All responsible sources capable of satisfying the Government's needs may submit a proposal that shall be considered by DARPA. Historically Black Colleges and Universities (HBCUs), Small Disadvantaged Businesses and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals. However, no portion of this announcement will be set aside for Small Disadvantaged Business, HBCU and MI participation due to the impracticality of reserving discrete or severable areas of this research for exclusive competition among these entities. Independent proposals from Government/National laboratories may be subject to applicable direct competition limitations, though certain Federally Funded Research and Development Centers are excepted per P.L. 103-337§ 217 and P.L 105-261 § 3136.

Historically Black Colleges and Universities (HBCUs) and Minority Institutions (MIs) are encouraged to submit proposals and join others in submitting proposals. However, no portion of this announcement will be set aside for HBCU and MI participation due to the impracticality of reserving discrete or severable areas of this research for exclusive competition among these entities.

2. Cost Sharing or Matching

Cost sharing is not required for this particular program; however, cost sharing will be carefully considered where there is an applicable statutory condition relating to the selected funding instrument (e.g., for any Technology Investment Agreement under the authority of 10 U.S.C. 2371).

IV. Application and Submission Information

1. Address to Request Application Package

This announcement and the Proposer Information Pamphlet (PIP) contain all information required to submit a proposal. No additional forms, kits, or other materials are needed. [Note: see paragraph 6 for reference to the PIP.]

2. Content and Form of Application Submission

Proposals not meeting the format described in the PIP may not be reviewed (see PROPOSAL PREPARATION AND FORMAT section of the PIP for pertinent details). Proposals MUST be submitted to DARPA in hard copy. Any submissions sent via fax or email will be disregarded. Responding to this announcement requires completion of an online Cover Sheet for each Proposal prior to submission. To do so, the offeror must go to <https://csc-ballston.dmeid.org/baa/index.asp?BAAid=06-37> and follow the instructions there. Each offeror is responsible for printing the Confirmation Sheet and attaching it to every proposal copy. If an offeror intends to submit more than one Proposal, a unique UserId and password must be used in creating each Cover Sheet.

All proposals must include the following:

- One (1) original of the full proposal including the Confirmation Sheet
- Four (4) copies of the full proposal including the Confirmation Sheet
- Two (2) electronic copies of the full proposal. These electronic copies must be:
 - On a CD
 - In PDF or Microsoft Word for IBM-compatible format
 - clearly labeled with BAA 06-37, proposer organization, proposal title (short title recommended) and “Copy ____ of 2”

DARPA will acknowledge receipt of complete submissions and assign control numbers that should be used in all further correspondence regarding proposals.

3. Submission Dates and Times

The full proposal (original and designated number of hard and electronic copies) must be submitted in time to reach DARPA by 12:00 PM (ET) June 28, 2006 (initial closing), in order to be considered during the initial evaluation phase. However, BAA 06-37 (ITMANET) will remain open until 12:00 NOON (ET) May 1, 2007. Thus, proposals may technically be submitted at any time from issuance of this announcement through 12:00 NOON (ET) May 1, 2007. However,

proposers should keep in mind that while any proposals submitted after the June 28, 2006 deadline may be evaluated by the Government, the likelihood of funding such proposals is greatly reduced.

4. Intergovernmental Review – N/A

5. Funding Restrictions

Authorization of precontract costs will be considered in situations of genuine urgency where programmatic benefits will accrue from their use.

6. Other Submission Requirements

Offerors must obtain the BAA 06-37 PIP, which provides further information on the areas of interest, submission, evaluation, funding processes, and proposal formats. This pamphlet will be posted directly to www.fbo.gov and www.grants.gov, and may also be obtained at <http://www.darpa.mil/ipto/Programs/itmanet/index.htm>

V. Application Review Information

1. Criteria (listed in descending order of relative importance):

- a. Overall Scientific and Technical Merit
- b. Innovative Technical Solution to the Problem
- c. Offeror's Capabilities, Commitments, Related Experience
- d. Constructive Plan
- e. Potential Contribution and Relevance to DARPA Mission
- f. Cost Realism

VI. Review and Selection Process

It is the policy of DARPA to ensure impartial, equitable, comprehensive proposal evaluations and to select the source (or sources) whose offer meets the Government's technical, policy, and programmatic goals. The primary basis for selecting proposals for acceptance shall be technical, importance to agency programs, and fund availability. In order to provide the desired evaluation, qualified Government personnel will conduct reviews and (if necessary) convene panels of experts in the appropriate areas.

Proposals will not be evaluated against each other, since they are not submitted in accordance with a common work statement. DARPA's intent is to review proposals as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons.

VII. Award Information Administration

1. Award Notices

DARPA will use electronic mail for all technical and administrative correspondence regarding this BAA, with the exception of selected/not-selected notifications. The official notifications will be sent via US mail to the Technical POC identified on the proposal coversheet.

2. Administrative and National Policy Requirements

Offerors may visit DARPA's Contracts Management Office (CMO) website (<http://www.darpa.mil/cmo/pages/modelgrantagreement.htm>) for model grant and cooperative agreement terms and conditions.

For Research Involving Human Subjects:

Proposals selected for award are required to comply with provisions of the Common Rule (32 CFR 219) on the protection of human subjects in research (<http://www.dtic.mil/biosys/downloads/32cfr219.pdf>) and the Department of Defense Directive 3216.2 (<http://www.dtic.mil/whs/directives/corres/html2/d32162x.htm>). All proposals that involve the use of human subjects are required to include documentation of their ability to follow Federal guidelines for the protection of human subjects. This includes, but is not limited to, protocol approval mechanisms, approved Institutional Review Boards, and Federal Wide Assurances. These requirements are based on expected human use issues sometime during the entire length of the proposed effort.

For proposals involving "greater than minimal risk" to human subjects within the first year of the project, performers must provide evidence of protocol submission to a federally approved IRB at the time of final proposal submission to DARPA. For proposals that are forecasted to involve "greater than minimal risk" after the first year, a discussion on how and when the proposer will comply with submission to a federally approved IRB needs to be provided in the submission. More information on applicable federal regulations can be found at the Department of Health and Human Services – Office of Human Research Protections website (<http://www.dhhs.gov/ohrp/>). Any aspects of a proposal involving human use should be specifically called out as a separate element of the statement of work and cost proposal to allow for independent review and approval of those elements.

3. Reporting

The Award Document for each proposal selected and funded will contain a mandatory requirement for submission of DARPA/IPTO Quarterly Status Reports and an Annual Project Summary Report. These reports will be electronically submitted by each awardee under this announcement via the DARPA/IPTO Technical – Financial Information Management System (T-FIMS). The T-FIMS URL will be furnished by the government upon award. Detailed data requirements can be found in the Data Item Description (DID) DI-MISC-81612A available on the Government's ASSIST database <http://assist.daps.dla.mil/quicksearch/>. Each performer will also be required to submit periodic reports on invention disclosure, election of title, and filing of patent applications.

There may also be additional reporting requirements for grants and cooperative agreements. DARPA's Contracts Management Office (CMO) website (<http://www.darpa.mil/cmo/pages/modelgrantagreement.htm>) contains information about model grant and cooperative agreement terms and conditions.

In addition, it is anticipated that if multiple awards are made, each performer team will be required to provide a constructive technical analysis of progress made by the other team(s) following each PI meeting (informal analysis) and at yearly intervals (formal analysis based on the Annual Project Summary Report). This collegially-intended "red-teaming" will provide a basis of dialogue across projects.

4. Agency Contacts

Administrative, technical or contractual questions must be received by April 20, 2007, at 12:00 noon ET, and should be sent via e-mail to itmanet-solicitation@darpa.mil. If e-mail is not available, please fax questions to (703) 741-7804 Attention: ITMANET Solicitation. All requests must include the name, email address, and phone number of a point of contact.

Solicitation Web site and Electronic File Retrieval:

<http://www.darpa.mil/ipto/programs/itmanet/index.htm>.

Postal address: DARPA/IPTO, ATTN: BAA 06-37, 3701 N. Fairfax Drive, Arlington, VA 22203-1714

For hand deliveries, the courier shall deliver the package to the DARPA Visitor Control Center at the address specified above. To ensure proper handling, the outer package, as well as the cover page of the proposal, must be marked "IPTO BAA 06-37."